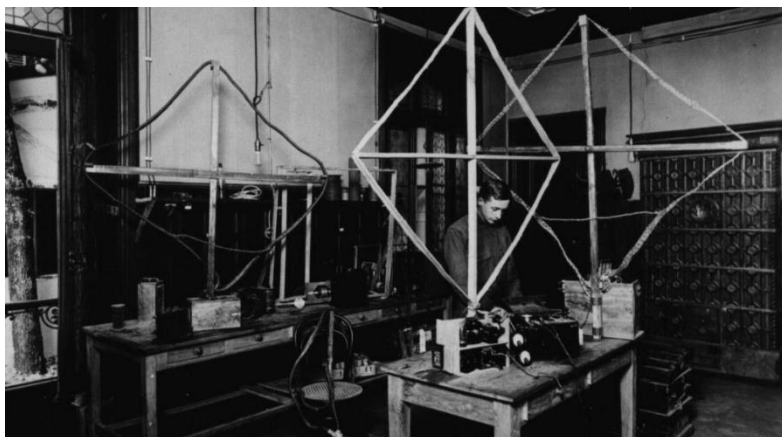


# HF Happenings 755

Volume 15, Issue 18, the week of 12 June 2017



## South African Radio League Top Band QSO Party

This is a fun activity to promote contacts on 160 metres between radio amateurs in Southern African countries and to encourage radio amateurs to apply for the South African Radio League Top Band Award.

The QSO Party takes place from 00:00 UTC on Thursday 22 June 2017 to 00:00 UTC on Monday 26 June 2017 with CW activity between 1 810 – 1 838 kHz and phone activity between 1 840 – 2 000 kHz. The exchange is a RS or RST report and provincial or country abbreviation. The QSO Party is open to all licensed amateurs that have access to the 160 metre band.

Each station can be worked once per mode i.e. once on Phone and again with CW. Each contact will count three (3) points. Bonus Points: Each South African call area and each DXCC country worked will be awarded with five (5) additional bonus points. Total Score = (Total QSO points) + (Bonus points)

Logs, in ADIF, Cabrillo or MS Excel format and labelled "your call sign Top Band," shall be submitted by 3 July 2017 by e-mail to [contest@sarl.org.za](mailto:contest@sarl.org.za).

## Keep it secret

Thank goodness, I receive many DX bulletins each week. South African radio amateurs who visit neighbouring countries or activate the islands along our coast are very secretive. I must read about it in DX bulletins from the USA and Italy and then publish it in HF Happenings so that the local radio amateurs know about it. Thanks guys!

## Potentially new DXCC Country on the horizon

Intrepid-DX Group News (Press Release - IRAQI Kurdistan to hold Independence Referendum. Potentially new DXCC Country on the horizon). If you follow the Intrepid-DX Group, you know that we visited Erbil, the capitol of Iraqi Kurdistan in April 2010 and conducted the YI9PSE DXpedition. Since that time, we have maintained our relationship with the Kurdistan Regional Government (KRG) and followed their plans for independence. The KRG has welcomed us to return for additional amateur radio activities.

You can now download your copy of HF Happenings from

[www.sarl.org.za/hf\\_happenings.asp](http://www.sarl.org.za/hf_happenings.asp)

## June

16 – Youth Day

16 to 18 – Bushveld Paradise Festival, Rooiberg Limpopo; Calitzdorp Winter Fest; Napier Patatfees

17 – [World QRP Day](#)

18 - Father's Day; National Day for the Blind

21 - Winter Solstice; Laylat al-Qadr

22 to 26 - [SARL Top Band QSO Party](#)

26 - Eid Al Fitr; Closing date Radio ZS July

29 June to 9 July – Grahamstown National Arts Festival

30 – All schools close

30 June to 2 July – Kirkwood Wildfees; Platteland Arts Festival, Smithfield

## July

1 – [SARL Newbie Sprint](#)

2 – [ZS5 Sprint](#)

5 to 8 - Innibos Arts Festival, Nelspruit

7 to 16 Knysna Oyster Festival

8 and 9 - [IARU HF Championships](#)

14 - RAE Registration opens

14 to 16 - [Ham Radio 2017, Friedrichshafen, Germany](#)

15 – [RaDAR Challenge and the SARL Winter QRP Contest](#)

15 and 16 - Franschhoek Bastille Festival

18 to 22 - Vryfees Arts Festival, Bloemfontein

22 - CTARC 71st AGM

23 – [ZS2 Sprint](#)

24 - All schools open

25 - Closing date August Radio ZS

29 and 30 - RSGB IOTA Contest

On 7 June 2017, KRG President Massoud Barzani announced following a meeting of the Kurdish political parties that the Iraqi Kurdish region will hold an independence referendum on 25 September 2017 as the first major step towards independence.

The Intrepid-DX Group will continue to follow developments from the KRG as they move towards independence. If they declare independence and all conditions are in place for UN acceptance, we will again hope to join forces with our friends the Tifariti Gang, [www.dxfriends.com](http://www.dxfriends.com), and activate Kurdistan together just as we joined teams to activate the new Republic of South Sudan in August/September 2011.

You can follow our progress at [www.Intrepid-DX.Com](http://www.Intrepid-DX.Com) or on our Facebook Page. Thank you, Paul S. Ewing, N6PSE, Vice President and Founder of the Intrepid-DX Group

## New Award Available

"Israel Mountains Award Program" (IMA) - This award program is dedicated for chasing stations active on Israel mountains. Complete details are available at <http://4xima.blogspot.co.il/?m=1>



## Pirate Alert

Jacky, 3B8CF, Secretary of the Mauritius Amateur Radio Society, reports that the local telecom authority, ICTA, has told him no license (including 3B9DX) has been issued for Rodrigues Island recently for anyone. The recently reported 3B9DX operation was apparently, illegal and probably "a joke by somebody who wanted to have some fun," says Jacky. The apparent pirate was active for a couple days in late April/early May on 20 and 15 CW.

## IARUMS - Iran radar back on 28 960 kHz

The IARU Region 1 Monitoring System newsletter reports an Iranian radar is again on 28 960 kHz and 50 kHz wide. The German PTT BNetzA in Konstanz has been informed.

They also report a mysterious beacon "D" from Far East Russia was audible on A1A (CW) in the evening hours on 7 039.3 kHz. Spurious transmissions were logged on 7 078.6, 7 117.9 and 7 157.2 kHz and also out of the band.

The International Amateur Radio Union Monitoring System (IARUMS) Region 1 May 2017 newsletter can be read at <http://www.iarums-r1.org/iarums/news2017/news1705.pdf>

## Sun Spots

Fifteen days of solar surface observations unblemished by sunspots occurred between March 7 and March 22, according to NASA's Solar Dynamic Observatory [www.popsci.com/sunspot-solar-cycle](http://www.popsci.com/sunspot-solar-cycle). The SDO also noted that this length of time without spots is the longest (so far!) since 2010. The current cycle is expected to bottom in 2019 or 2020.

## Caffeine

As reported in *The Atlantic Magazine* and other sources, according to a recent review of a wide range of medical research related to caffeine intake 400 mg of caffeine might be considered the current 'safe daily limit' of intake. This level applies to healthy, non-pregnant adults. Higher levels are not necessarily unsafe it's just that the research review and data don't support any conclusions in that regard. [www.theatlantic.com/health/archive/2017/04/caffeine-probably-safe/523929/](http://www.theatlantic.com/health/archive/2017/04/caffeine-probably-safe/523929/)

## Word to the Wise

Umbra: On Earth, as it relates to a total solar eclipse, the deepest part of the shadow cast by moon as it comes between the Sun and the Earth. In August, a total solar eclipse will occur across a wide swath of the US from Oregon to South Carolina, and some Amateurs will be participating in an experiment to characterize the eclipse's effect on propagation. <http://hamsci.org/projects/2017-total-solar-eclipse/2017-eclipse-experiment-description> Astronomers also call the dark central portion of a sunspot the umbra. Here's a NASA visualization of the path the umbra of the August eclipse will take across the U.S. <https://nasaviz.gsfc.nasa.gov/12458>

## Club Project

My local radio club has often given away inexpensive, imported QRP CW transceiver kits called "Pixies" as door prizes. These kits can be found at some hamfests, on eBay, or via sites like Banggood. A quick, subjective, operational comparison of one such kit's receiver sensitivity on 40 meters versus some well-known vintage rigs

was made by ZS6SVJ in this video <https://www.youtube.com/watch?v=a5hkk-77B44>. Make sure you read the scrolling subtitles for his comments.

## Software Defined Radio

The Tucson Amateur Packet Radio (TAPR) organization's forum around SDR topics at the Hamvention was recorded and uploaded to YouTube by HamRadioNow [https://youtu.be/FrVDL\\_-HOds?t=561](https://youtu.be/FrVDL_-HOds?t=561). SDR hardware and software tools have increasing importance as we continue to find and remove pesky RFI sources in our contest environments.

"Open Source Spectrum Monitoring," was presented by Michael, AD0NR, and Dominic Spill. By using open source SDR hardware on a pre-programmed tuning-and-capture schedule instead of being commanded by the attached computer, approximately 6 GHz of spectrum can be captured and displayed in less than 750 milliseconds - a sweep rate of 8 GHz per second [https://youtu.be/FrVDL\\_-HOds?t=1038](https://youtu.be/FrVDL_-HOds?t=1038). Combined with a waterfall display, a much better picture of spectrum utilization is possible. Some other interesting tricks and tools are described which may provide additional ways to visualize various spectra, and with multiple antennas, to potentially identify and direction find signals in near real time.

"SDR Noise Reduction Techniques" by Warren, NR0V describes how increasing computing power combined with new algorithms can lead to better noise blanking, and improved signal to noise ratios [https://www.youtube.com/watch?v=FrVDL\\_-HOds](https://www.youtube.com/watch?v=FrVDL_-HOds). Many of the concepts are already realized in the WDSP library, part of the High Performance SDR (HPSDR) project. A method called "Spectral Noise Blanking" uses a prediction algorithm that classifies impulse noise as errors in the original signal. The prediction algorithm can provide correction to the original signal, effectively removing the impulse noise. Dramatic improvements can be realized [https://youtu.be/FrVDL\\_-HOds?t=3813](https://youtu.be/FrVDL_-HOds?t=3813).

"Introduction to RTL-SDR, Ultra Cheap Software Defined Radio" [https://youtu.be/FrVDL\\_-HOds?t=4027](https://youtu.be/FrVDL_-HOds?t=4027) was presented by Carl Laufer, the person behind the RTL-SDR website <http://rtl-sdr.com/>. His talk, aimed for newcomers to the topic area, focused on version three of the USB RTL-SDR dongle, which improves the performance and increases the utility over previous versions. Of particular interest to contesters in the never-ending quest to eliminate RFI is the description of Tim Havens' DRIVEBY RFI finding techniques <http://blog.dxers.info/2015/01/driveby-system-live-on-road.html> and Disney's (yes, that Disney) EM Sense project <https://www.disneyresearch.com/wp-content/uploads/EMSense-Recognizing-Handled-Uninstrumented-Electro-Mechanical-Objects-Using-Software-Defined-Radio-Paper.pdf>, which uses a database to match EMI signal signatures to electronic devices.

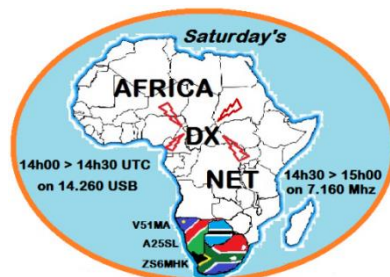
## Operating Tip

Check and Change Batteries BEFORE the Contest. This tip comes courtesy of Doug, W7ZZ: 'In the middle of the 7th Area QSO Party, while my computer was activating the transmitter and repeatedly calling CQ via the .WAV file, the wireless keyboard's batteries died. I realized this as I tried to stop the transmitter from being repeatedly keyed, calling endless CQs. Typing didn't stop the CQ, as it should have. The ESCAPE key didn't stop it either. After initial panic, I realized the batteries must have died and that I had no way to communicate with computer other than to power it down. I ran around the house and, fortunately, found a couple AAA batteries, all while I'm calling CQ. I inserted the batteries, hit the "connect" button on the bottom of the keyboard and breathed a sigh of relief as the CQs stopped. Never will I start a contest again without fresh batteries in the keyboard and mouse!'

## African DX

Mali, TZ. Fredo, TZ4PR, is now active as TZ4PR from northern Mali until October 2017. Activity will be on various HF bands using a Yaesu FT-857 transceiver into a LDG Z11 Pro II tuner and 15,9 m long wire antenna. QSL via F1UIJ direct.

Republic of Congo, TN. It was announced that members/team operators from the DX Friends, <http://www.dxfriends.com>, will be active as TN5R from Brazzaville. Look for more details to be forthcoming.



## African Islands

IOTA frequencies

CW: 28 040 24 920 21 040 18 098 14 040 10 114 7 030 3 530 kHz

SSB: 28 560 28 460 24 950 21 260 18 128 14 260 7 055 3 760 kHz

## Contest Calendar

This week's contests as compiled by Bruce Horn, WA7BNM. The period covered is 12 to 19 June 2017

### Phone Fray

02:30 - 03:00 UTC 14 June

Geographic Focus: North America

Participation: Worldwide

Mode: SSB

Bands: 160, 80, 40, 20, 15 m

Classes: Single Op

Max power: 100 watts

Exchange: NA: Name and state, province or country; non-NA: Name

Work stations: Once per band

QSO Points: NA station: 1 point per QSO; non-NA

station: 1 point per QSO with an NA station

Multipliers: Each US state (including KH6/KL7) once per band; Each VE province/territory once per band; Each North American country (except W/VE) once per band

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 03:00 UTC 16 June 2017

E-mail logs to: (none)

Post log summary at: <http://www.3830scores.com>

Mail logs to: (none)

Find rules at: [http://www.per-luma.com/Phone\\_Fray\\_Contest\\_Rules.pdf](http://www.per-luma.com/Phone_Fray_Contest_Rules.pdf)

### CWops Mini-CWT Test

13:00 - 14:00 UTC and 19:00 - 20:00 UTC 14 June and 03:00 - 04:00 UTC 15 June

Geographic Focus: Worldwide

Participation: Worldwide

Awards: Worldwide

Mode: CW

Bands: 160, 80, 40, 20, 15, 10 m

Classes: Single Op - QRP, low or high

Max power: HP: >100 watts; LP: 100 watts; QRP: 5 watts

Exchange: Member: Name and member no; non-Member: Name and state, province or country

Work stations: Once per band

QSO Points: 1 point per QSO

Multipliers: Each call once

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 04:00 UTC 17 June 2017

Post log summary at: <http://www.3830scores.com>

Mail logs to: (none)

Find rules at: <http://www.cwops.org/cwt.html>

### RSGB 80 m Club Championship, CW

19:00 - 20:30 UTC 14 June

Geographic Focus: United Kingdom

Participation: Worldwide

Awards: United Kingdom

Mode: CW

Bands: 80 m Only

Classes: (none)

Exchange: RST and serial no

QSO Points: 1 point per QSO

Multipliers: (none)

Score Calculation: (see rules)

Submit logs by: 23:59 UTC 15 June 2017

Upload log at: <http://www.rsgbcc.org/cgi-bin/hfenter.pl>

Mail logs to: (none)

Find rules at:

<http://www.rsgbcc.org/hf/rules/2017/r80mcc.shtml>

### NCCC RTTY Sprint

01:45 - 02:15 UTC 16 June

Geographic Focus: North America

Participation: Worldwide

Mode: RTTY

Bands: (see rules)

Classes: (none)

Exchange: Serial no, name and QTH

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 18 June 2017

E-mail logs to: (none)

Post log summary at: <http://www.3830scores.com/>

Mail logs to: (none)

Find rules at:

<http://www.ncccsprint.com/rttyns.html>

### NCCC Sprint

02:30 - 03:00 UTC 16 June

Geographic Focus: North America

Participation: Worldwide

Mode: CW  
 Bands: (see rules)  
 Classes: (none)  
 Exchange: Serial no, name and QTH  
 Score Calculation: Total score = total QSO points x total mults  
 Submit logs by: 18 June 2017  
 E-mail logs to: (none)  
 Post log summary at: <http://www.3830scores.com/>  
 Mail logs to: (none)  
 Find rules at:  
<http://www.ncccsprint.com/rules.html>

All Asian DX Contest, CW: 00:00 UTC 17 June to 24:00 UTC 18 June  
 Geographic Focus: Asia  
 Participation: Worldwide  
 Mode: CW  
 Bands: 160, 80, 40, 20, 15, 10 m  
 Classes: Asian Single Op Single Band - high or low; Non-Asian Single Op Single Band – high; JA Single Op All Band - high, low, junior or silver; Asian Single Op All Band - high or low; Non-Asian Single Op All Band – high; Multi-Single; Multi-Multi  
 Max power: HP: >100 watts; LP: 100 watts  
 Exchange: RST and 2-digit age  
 Work stations: Once per band  
 QSO Points: (see rules)  
 Multipliers: Asian Stations: DXCC entities once per band; non-Asian Stations: Asian prefixes once per band  
 Score Calculation: Total score = total QSO points x total mults  
 Submit logs by: 19 July 2017  
 E-mail logs to: [aacw@jarl.org](mailto:aacw@jarl.org)  
 Web-to-Cabrillo form: [http://www.b4h.net/cab-forms/aadxcw\\_cab3.php](http://www.b4h.net/cab-forms/aadxcw_cab3.php)  
 Mail logs to: JARL, All Asian DX Contest, CW, 170-8073, Japan  
 Find rules at: [https://www.jarl.org/English/4\\_Library/A-4-3\\_Contests/2017AA\\_rule.htm](https://www.jarl.org/English/4_Library/A-4-3_Contests/2017AA_rule.htm)

Ukrainian DX Classic RTTY Contest  
 12:00 UTC 17 June to 11:59 UTC 18 June  
 Geographic Focus: Worldwide  
 Participation: Worldwide  
 Mode: RTTY  
 Bands: 80, 40, 20, 15, 10 m  
 Classes: Single Op All Band - low or high; Single Op All Band 6-Hour; Single Op Single Band; Multi-Single  
 Max power: HP: >100 watts; LP: 100 watts  
 Exchange: Ukraine: RST and 2-letter oblast; non-Ukraine: RST and serial no  
 Work stations: Once per band

QSO Points: 1 point per QSO with same country; 2 points per QSO with different country, same continent; 3 points per QSO with different continent; non-UR Stations: 10 points per QSO with Ukraine  
 Multipliers: UR Stations: each DXCC/WAE country once per band; non-UR Stations: each DXCC/WAE country once per band; non-UR Stations: each Ukraine oblast once per band  
 Score Calculation: Total score = total QSO points x total mults  
 Submit logs by: 3 July 2017  
 E-mail logs to: [urdxcrty@ukr.net](mailto:urdxcrty@ukr.net)  
 Mail logs to: (none)  
 Find rules at: <http://urdx.org/rty/rules.php?english>

ARR BPSK63 Contest  
 12:00 UTC 17 June to 12:00 UTC 18 June  
 Geographic Focus: Worldwide  
 Participation: Worldwide  
 Mode: BPSK63  
 Bands: 160, 80, 40, 20, 15, 10 m  
 Classes: Single Op  
 Max power: 100 watts  
 Exchange: RST and serial no  
 Work stations: Once per band  
 QSO Points: 1 point per QSO with non-CT station; 5 points per QSO with CT station; 10 points per QSO with CT1ARR, CQ3EPC, CQ7EPC, CS2EPC  
 Multipliers: Each DXCC country once per band; Each CT station once per band  
 Score Calculation: Total score = total QSO points x total mults  
 Submit logs by: 18 July 2017  
 E-mail logs to: [bpsk63@ct1arr.org](mailto:bpsk63@ct1arr.org)  
 Mail logs to: (none)  
 Find rules at: <http://ct1arr.org/9o-concurso-bpsk63-da-arr/>

Stew Perry Topband Challenge  
 15:00 UTC 17 June to 15:00 UTC 18 June  
 Geographic Focus: Worldwide  
 Participation: Worldwide  
 Awards: Worldwide  
 Mode: CW  
 Bands: 160 m Only  
 Classes: Single Op; Multi-Op  
 Max operating hours: 14 hours  
 Max power: HP: >100 watts; LP: 5 - 100 watts; QRP: <5 watts  
 Exchange: 4-Character grid square  
 QSO Points: 1 point per QSO plus 1 point per 500 km; multiply QSO points by 2 if low power station; multiply QSO points by 4 if QRP station  
 Multipliers: Low power: x 1,5; QRP: x 3  
 Score Calculation: Total score = total QSO points x power multiplier



Submit logs by: 3 July 2017  
E-mail logs to: [tbd@kkn.net](mailto:tbd@kkn.net)  
Mail logs to: BARC, 15125 SE Bartell Rd, Boring, OR 97009, USA  
Find rules at: <http://www.kkn.net/stew/>

West Virginia QSO Party  
16:00 UTC 17 June to 02:00 UTC 18 June  
Geographic Focus: United States/Canada state/province QSO party  
Participation: Worldwide  
Mode: CW, SSB, Digital  
Bands: 80, 40, 20, 15, 10 m  
Classes: Single Op – fixed - CW, SSB, digital or mixed- QRP, low or high; Multi-Multi – fixed - CW, SSB, digital or mixed- QRP, low or high; Mobile - CW, SSB, digital or mixed- QRP, low or high  
Max power: HP: >100 watts; LP: 100 watts; QRP: 5 watts CW, 10 watts phone  
Exchange: WV: RS(T) and county; non-WV: RS(T) and state, province or country  
Work stations: Once per band per mode  
QSO Points: 2 points per SSB QSO with WV mobile; 3 points per CW QSO with WV mobile; 1 point per SSB QSO with fixed; 2 points per CW QSO with fixed; Bonus: 100 points per QSO with W8WVA; WV Mobile Bonus: 100 points for each county activated  
Multipliers: WV Stations: Each WV county once per band; WV Stations: Each state, VE province, DXCC country once; non-WV Stations: Each WV county once  
Score Calculation: Total score = (total QSO points x total mults) and bonus points  
Submit logs by: 5 July 2017  
E-mail logs to: [wvqlogs@gmail.com](mailto:wvqlogs@gmail.com)  
Mail logs to: Randy Goff KD8G, 1289 Washington Gardens Cir, Washington, WV 26181, USA  
Find rules at: <http://www.qsl.net/wvsarc/wvqp/wvqp.html>

Feld Hell Sprint  
18:00 - 19:59 UTC 17 June  
Geographic Focus: Worldwide  
Participation: Worldwide  
Mode: Feld Hell  
Bands: 160, 80, 40, 20, 15, 10, 6 m  
Classes: (none)  
Max power: Standard: 100 watts; QRP: 5 watts  
Exchange: (see rules)  
Work stations: Once per band

## Next Week's Contests

Phone Fray, 02:30 - 03:00 UTC 21 June  
CWops Mini-CWT Test, 13:00 - 14:00 UTC and 19:00 - 20:00 UTC 21 June and 03:00 - 04:00 UTC 22 June  
NAQCC CW Sprint, 00:30 - 02:30 UTC 22 June

QSO Points: (see rules)  
Bonus Points: (see rules)  
Multipliers: (see rules)  
Score Calculation: (see rules)  
Submit logs by: 21 June 2017  
Upload log at: <https://sites.google.com/site/feldhellclub/>  
Mail logs to: (none)  
Find rules at: <https://sites.google.com/site/feldhellclub/Home/contests/sprints/field-day-sprint>

Kid's Day Contest  
18:00 - 23:59 UTC 18 June  
Mode: SSB  
Bands: 80, 40, 20, 17, 15, 12, 10, 2 m repeaters  
Classes: (none)  
Exchange: name and age and QTH and favourite colour  
Submit logs by: July 18, 2017  
E-mail logs to: (none)  
Mail logs to: (see rules)  
Find rules at: <http://www.arrl.org/kids-day>

Run for the Bacon QRP Contest  
01:00 - 03:00 UTC, Jun 19  
Geographic Focus: Worldwide  
Participation: Worldwide  
Mode: CW  
Bands: 160, 80, 40, 20, 15, 10 m  
Classes: Single Band  
All Band  
Max power: 5 watts  
Exchange: RST, state, province or country and member no or power  
Work stations: Once per band  
QSO Points: 1 point per QSO with non-member; 3 points per QSO with member on same continent; 5 points per QSO with member on different continent  
Multipliers: Each state, province, or country once; Multiply mults by 2 if >50 members worked  
Score Calculation: Total score = total QSO points x total mults  
Submit logs by: 25 June 2017  
E-mail logs to: (none)  
Upload log at: <http://qrptest.com/pigrun/autolog.php>  
Mail logs to: (none)  
Find rules at: <http://qrptest.com/pigrun/>

RSGB 80 m Club Championship, SSB, 19:00 - 20:30 UTC 22 June  
NCCC RTTY Sprint, 01:45 - 02:15 UTC 23 June  
NCCC Sprint, 02:30 - 03:00 UTC 23 June  
Battle of Carabobo International Contest, 00:00 UTC 24 June to 24:00 UTC 25 June  
UFT QRP Contest, 06:00 - 09:00 UTC and 14:00 - 17:00 UTC 24 June  
Ukrainian DX DIGI Contest, 12:00 UTC 24 June to 12:00 UTC 25 June  
His Majesty, the King of Spain SSB Contest, 12:00 UTC 24 June to 12:00 UTC 25 June  
ARRL Field Day, 18:00 UTC 24 June to 21:00 UTC 25 June

### Communication Tower Best Practices

"Communication Tower Best Practices," a jointly published document by the FCC and OSHA, seeks to reduce risks in the commercial tower industry. The FCC and OSHA have partnered to publish a document entitled "Communication Tower Best Practices" This document is not a how-to, nor prescriptive on practical tower construction or maintenance -- it's more of a description of the practices and procedures the various entities involved in commercial towers should use for management, coordination, and documentation of work practices. [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2017/db0601/DOC-345150A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0601/DOC-345150A1.pdf). (They say nothing about acrophobia!)



*Items used with acknowledgement to the ARRL Letter, the ARRL DX News, the ARRL Contest Update, OPDX Bulletin, 425 DX Bulletin, DXNL Newsletter, WIA-News, the RSGB News, DxCoffee, Southgate ARC News, DX World and the Amateur Radio Newsletter*